**Amendments to the Claims**:

After granting the application a filing date, and before calculating the fee, please cancel Claims 5 and 6:

1. (Original) A refrigerated compressed gas dryer variable evaporator control method comprising:

a. introducing compressed gas at a first temperature through a first flow path in a heat exchanger;

b. circulating a refrigerant through a second flow path in said heat exchanger, said refrigerant having a second temperature measured at a refrigerant inlet of said heat exchanger, said second temperature being less than said first temperature;

c. cooling said compressed gas to a third temperature as it flows through said heat exchanger; and

d. controlling said second temperature responsive to changes in said third temperature to generally maintain said third temperature at a desired value.

2. (Original) The method of claim 1 further comprising:

a. sensing a fourth temperature at a single location in said heat exchanger at which said fourth temperature is representative of said third temperature when a compressed gas load is above a certain level, and representative of said second temperature when said compressed gas load is below said certain level; and

b. controlling said second temperature responsive to changes in said further temperature to generally maintain said fourth temperature at said desired value.

3. (Original) The method of claim 1 wherein said refrigerant is circulated under pressure, said method further comprising:

a. maintaining said refrigerant at a predetermined pressure during circulation, said second temperature having a correlation to said predetermined pressure; and

b. controlling said predetermined pressure responsive to changes in said third temperature such that said second temperature is correspondingly controlled to generally maintain said third temperature to said desired value.

4. (Original) The method of claim 3, further comprising:

a. sensing a fourth temperature at a single location in said heat exchanger at which said further temperature is representative of said third temperature when a compressed gas load is above a certain level, and representative of said second temperature when said compressed gas load is below a certain level; and

b. controlling said predetermined pressure responsive to changes in said third temperature such that said second temperature is correspondingly controlled to generally maintain said third temperature at said desired value.

5. (Cancelled)

6. (Cancelled)

7. (Original) A variable evaporator control refrigerated compressed gas dryer comprising:

a. an evaporator heat exchanger having a first flow path for compressed gas at a first temperature;

b. said evaporator heat exchanger having a second flow path for a refrigerant at a second temperature which is lower than said first temperature to cool said compressed gas to a third temperature;

c. a compressor to circulate said refrigerant at a predetermined pressure, said predetermined pressure having a correlation to said second temperature;

d. a temperature sensor to sense said third temperature at an outlet of said first flow path;

e. a valve intermediate said second flow path and a source of refrigerant, said valve controllable to admit refrigerant into circulation to adjust said predetermined pressure; and

f. a controller connected to receive feedback from said temperature sensor indicative of said third temperature, said controller controlling said valve to adjust said predetermined pressure and thus adjust said second temperature to generally maintain said third temperature at a desired value.

8. (Original) The compressed gas dryer of claim 7 further comprising a second temperature sensor to sense said second temperature at an inlet of said second flow path.

9. (Original) The compressed dryer of claim 7 further comprising a pressure sensor to sense said predetermined pressure in said second flow path and to provide feed back indicative of said predetermined pressure to said controller to control said valve to adjust said predetermined pressure and thus said second temperature to generally maintain said third temperature at said desired value.

10. (Original) The compressed gas dryer to claim 7 further comprising

a. said temperature sensor positioned at a single location to sense a fourth temperature wherein said fourth temperature is representative of said third temperature when a compressed gas load is above a certain level, and representative of said second temperature when said compressed gas load is below said certain level; and

b. said controller connected to receive feedback from said temperature sensor indicative of said fourth temperature to control said valve to adjust said predetermined pressure and thus said second temperature such that said fourth temperature is generally maintained at said desired value.

11. (Original) The compressed gas dryer of claim 10 wherein said evaporator heat exchanger further comprises a smooth tube evaporator heat exchanger.

12. (Original) The compressed gas dryer of claim 11 wherein said smooth tube evaporator heat exchanger further comprises:

a. an outer cover;

b. a plurality of smooth tubes enclosed within said outer cover, said first flow path being at least partially through said plurality of smooth tubes;

c. said second flow path being within said outer cover and communicating with an exterior of said plurality of smooth tubes;

d. a tube sheet dividing a portion of said evaporator heat exchanger, said second flow path communicating on a first side of said tube sheet;

e. each of said plurality of smooth tubes having an end extending through said tube sheet to a second side thereof which is not in communication with said second flow path; and

f. said single point temperature sensor being disposed in contact with said end of at least one of said plurality of smooth tubes which extends through said tube sheet.

13. (Original) The compressed gas dryer of claim 12 further comprising said end in contact with said single point temperature sensor having an extended length portion, and said single point temperature sensor disposed in contact with said extended length portions.

14. (Original) A variable evaporator control system comprising:

a. an evaporator heat exchanger having a first flow path for a gas at a first temperature and a second flow path for circulation of a refrigerant at a second temperature which is lower than said first temperature to cool said gas to a third temperature;

b. a compressor to circulate said refrigerant;

c. a temperature sensor positioned in said evaporator heat exchanger at a single location to sense a fourth temperature which is representative of said third temperature when a

gas load is above a certain level, and representative of said second temperature when said gas load is below said certain level; and

d. a controller connected to receive feedback from said temperature sensor indicative of said fourth temperature to control said second temperature to generally maintain said fourth temperature at a desired value.

15. (Original) The variable evaporator control system of claim 14 further comprising:

a. compressor to circulate said refrigerant at a predetermined pressure, said second temperature having a correlation to said predetermined pressure; and

b. a valve positioned intermediate said second flow path and a source of refrigerant, said valve controllable by said controller to adjust admission of said refrigerant into circulation to adjust said predetermined pressure and thus adjust said second temperature to generally maintain said fourth temperature at said desired value.

16. (Original) A variable evaporator control method maximizing cooling of a gas passed through an evaporator heat exchanger of a given length, wherein gas at a first temperature flows through said evaporator heat exchanger in a first flow path and a refrigerant at a second temperature lower than said first temperature is circulated through said evaporator heat exchanger in a second flow path to cool said gas to a third temperature, the difference between said first and second temperatures being an approach temperature, said control method comprising:

a. increasing said approach temperature as a gas load through said evaporator heat exchanger increases;

b. decreasing said approach temperature as a gas load through said evaporator heat exchanger decreases; and

c. wherein said third temperature is thus generally maintained at a desired value irrespective of said gas load.

17. (Original) The method of claim 16 further comprising controlling said second temperature to implement said increasing or decreasing of said approach temperature.

18. (Original) The method of claim 17 further comprising:

a. sensing a fourth temperature at a single location in said evaporator heat exchanger at which said fourth temperature is representative of said third temperature when said gas load is above a certain level, and representative of said second temperature when said gas load is below said certain level; and

b. controlling said second temperature responsive to said fourth temperature such that said fourth temperature is generally maintained at a desired value irrespective of said gas load.

19. (Original) A compressed gas dryer having a heat exchanger with a first flow path for a compressed gas and a second flow path for a refrigerant to cool said compressed gas, the compressed gas dryer comprising:

a. a temperature sensor to sense a temperature of said compressed gas at an outlet of said first flow path; and

b. a controller connected to receive feed back from said temperature sensor indicative of said temperature of said compressed gas at said outlet of said first flow path, said controller controlling a temperature of said refrigerant at an inlet of said second flow path to generally maintain said temperature of said compressed gas at said outlet of said first flow path at a desired value.

20. (Original) The compressed gas dryer of claim 19 further comprising:

a. said temperature sensor of said compressed gas at said outlet of said first flow path being positioned in said heat exchanger at a single location;

b. a temperature sensed at said single location being representative of said temperature of said compressed gas at said outlet of said first flow path when a compressed gas load is above a certain level;

c. said temperature sensed at said single location being representative of said temperature of said refrigerant at said inlet of said second flow path when said compressed gas load is below said certain level; and

d. said controller controlling said temperature of said refrigerant at said inlet of said second flow path to generally maintaining said temperature sensed at said single location at said desired value.

21. (Original) The compressed gas dryer of claim 20 wherein said desired value further comprises a value above 32 degrees Fahrenheit.